

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):

Fitzgerald

CONFIRMATION NO.:

8574

SERIAL NO.:

10/826,156

GROUP NO.:

2826

FILING DATE:

April 16, 2004

EXAMINER:

Tran, Minh Loan

TITLE:

CONTROLLING THREADING DISLOCATION DENSITIES IN Ge

ON Si USING GRADED GeSi LAYERS AND PLANARIZATION

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Each of the references A1, A3-A15, A24-A162, B1-B30, and C1-C105 were previously cited in U.S. Patent Application Serial No. 09/611,024 from which this application claims priority. Accordingly, pursuant to 37 C.F.R. § 1.98(d) and in accordance with 37 C.F.R. § 1.98(a)(2), Applicants have not supplied copies of the references cited on the attached Form PTO-1449, but shall do so upon request.

09/09/2005 SFELEKE1 00000051 10826156

02 FC:1806

180.00 OP

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and

	the requisite Statement is below, OR
\boxtimes	the requisite fee under 37 C.F.R. 1.17(p), namely \$180.00, is included herein, or
(3)	after the mailing date of a final action or notice of allowance but before the payment of the issue fee, AND
	the requisite Statement is below, AND
	the requisite petition fee under 37 C.F.R. 1.17(p), namely \$180.00 is included herein.

In addition, Applicants wish to inform the Examiner about the following co-pending patent applications and Office actions issued therein:

- 1.) U.S. Patent No. 6,107,653, U.S.S.N. 09/103,672 (Docket No. ASC-023), filed June 23, 1998 by Fitzgerald;
- 2.) U.S. Patent No. 6,232,138, U.S.S.N. 09/198,960 (Docket No. ASC-024DV), filed November 24, 1998 by Fitzgerald et al.;
- 3.) U.S. Patent No. 6,291,321, U.S.S.N. 09/265,016 (Docket No. ASC-023DV), filed March 9, 1999 by Fitzgerald;
- 4.) U.S. Patent No. 6,521,041, U.S.S.N. 09/289,514 (Docket No. ASC-022), filed April 9, 1999 by Wu et al.;
- 5.) U.S. Patent No. 6,555,839, U.S.S.N. 09/859,138 (Docket No. ASC-035), filed May 16, 2001 by Fitzgerald;
- 6.) U.S. Patent No. 6,573,126, U.S.S.N. 09/928,126 (Docket No. ASC-025), filed August 10, 2001 by Cheng et al.;
- 7.) U.S. Patent No. 6,583,015, U.S.S.N. 09/923,207 (Docket No. ASC-042), filed August 6, 2001 by Fitzgerald et al.;
- 8.) U.S. Patent No. 6,593,191, U.S.S.N. 09/859,137 (Docket No. ASC-036), filed January 17, 2001 by Fitzgerald;
- 9.) U.S. Patent No. 6,602,613, U.S.S.N. 09/764,182 (Docket No. ASC-031), filed May 16, 2001 by Fitzgerald;
- 10.)U.S. Patent No. 6,876,010, U.S.S.N. 09/611,024 (Docket No. ASC-023C1), filed June 7, 2000 by Fitzgerald;
- 11.)U.S. Patent No. 6,646,322, U.S.S.N. 09/906,438 (Docket No. ASC-051), filed July 16, 2001 by Fitzgerald;
- 12.)U.S. Patent No. 6,649,480, U.S.S.N. 09/884,172 (Docket No. ASC-044), filed June 19, 2001 by Fitzgerald et al.;
- 13.)U.S. Patent No. 6,677,192, U.S.S.N. 09/906,545 (Docket No. ASC-048), filed July 16, 2001 by Fitzgerald;

- 14.)U.S. Patent No. 6,703,144, U.S.S.N. 10/391,086 (Docket No. ASC-031C1), filed March 18, 2003 by Fitzgerald;
- 15.)U.S. Patent No. 6,703,688, U.S.S.N. 09/906,200 (Docket No. ASC-049), filed July 16, 2001 by Fitzgerald;
- 16.)U.S. Patent No. 6,723,661, U.S.S.N. 09/906,201 (Docket No. ASC-050), filed July 16, 2001 by Fitzgerald;
- 17.)U.S. Patent No. 6,724,008, U.S.S.N. 09/906,551 (Docket No. ASC-047), filed July 16, 2001 by Fitzgerald;
- 18.)U.S. Patent No. 6,730,551, U.S.S.N. 10/211,126 (Docket No. ASC-012), filed August 2, 2002 by Lee et al.;
- 19.)U.S. Patent No. 6,750,130, U.S.S.N. 09/764,177 (Docket No. ASC-032), filed January 7, 2001 by Fitzgerald;
- 20.)U.S. Patent No. 6,830,976, U.S.S.N. 09/906,534 (Docket No. ASC-054), filed July 16, 2001 by Fitzgerald;
- 21.)U.S. Patent No. 6,881,632, U.S.S.N. 10/611,739 (Docket No. ASC-044C1), filed July 1, 2000 by Fitzgerald et al.;
- 22.)U.S. Publication No. 2002/0084000, U.S.S.N. 10/022,689 (Docket No. ASC-023DVC2), filed December 17, 2001 by Fitzgerald;
- 23.)U.S. Publication No. 2002/0100942, U.S.S.N. 09/884,517 (Docket No. ASC-043), filed June 19, 2001 by Fitzgerald et al.;
- 24.)U.S. Publication No. 2002/0123183 U.S.S.N. 09/906,533 (Docket No. ASC-052), filed July 16, 2001 by Fitzgerald;
- 25.)U.S. Publication No. 2002/0125471, U.S.S.N. 10/005,274 (Docket No. ASC-043CP), filed December 4, 2001 by Fitzgerald et al.;
- 26.)U.S. Publication No. 2002/0168864, U.S.S.N. 10/116,559 (Docket No. ASC-026), filed April 4, 2002 by Cheng et al.;
- 27.)U.S. Publication No. 2003/0013323, U.S.S.N. 10/172,542 (Docket No. ASC-057), filed June 14, 2002 by Hammond et al.;
- 28.)U.S. Publication No. 2003/0034529, U.S.S.N. 10/266,339 (Docket No. ASC-043C1), filed October 8, 2002 by Fitzgerald et al.;
- 29.)U.S. Publication No. 2003/0057439, U.S.S.N. 10/216,085 (Docket No. ASC-015), filed August 9, 2002 by Fitzgerald;
- 30.)U.S. Publication No. 2003/0102498-A1, U.S.S.N. 10/253,361 (Docket No. ASC-018), filed September 24, 2002 by Braithwaite et al.;
- 31.)U.S. Publication No. 2003/0215990, U.S.S.N. 10/389,003 (Docket No. ASC-019), filed March 14, 2003 by Fitzgerald et al.;
- 32.)U.S. Publication No. 2003/0227057, U.S.S.N. 10/264,935 (Docket No. ASC-008), filed October 4, 2002 by Lochtefeld et al.;
- 33.)U.S. Publication No. 2004/0005740, U.S.S.N. 10/456,103 (Docket No. ASC-008C) filed on June 6, 2003 by Lochtefeld et al.;

Information Disclosure Statement Serial No.10/826,156 Page 4 of 4

- 34.)U.S. Publication No. 2004/0031979-A1, U.S.S.N. 10/456,708 (Docket No. ASC-008B), filed June 6, 2003 by Lochtefeld et al.;
- 35.)U.S. Publication No. 2004/0075149, U.S.S.N. 10/625,018 (Docket No. ASC-043C2), filed July 23, 2003 by Fitzgerald et al.;
- 36.)U.S. Publication No. 2004/0219726, U.S.S.N. 10/854,556 (Docket No. ASC-054C1), filed May 26, 2004 by Fitzgerald;
- 37.)U.S. Publication No. 2004/0262631, U.S.S.N. 10/826,156 (Docket No. ASC-023C2) filed on April 16, 2004 by Fitzgerald;
- 38.)U.S.Publication No. 2005/0009288, U.S.S.N. 10/802,186 (Docket No. ASC-025DV2C1) filed on March 17, 2004, by Cheng et al.;
- 39.)U.S. Publication No. 2005/0156246, U.S.S.N. 11/073,780 (Docket No. ASC-008D1) filed on March 7, 2005 by Langdo et al;
- 40.) U.S. Serial No. 10/774,890 (Docket No. ASC-049C1), filed February 9, 2004 by Fitzgerald;
- 41.)U.S. Serial No. 11/120,675 (Docket No. ASC-008CC2), filed May 3, 2005 by Langdo et al;
- 42.)U.S. Serial No. 11/125,507 (Docket No. ASC-008CC1), filed May 10, 2005 by Langdo et al;
- 43.)U.S. Serial No. 11/127,508 (Docket No. ASC-008CD1), filed May 12, 2005 by Langdo et al; and
- 44.)U.S. Serial No. 11/128,628 (Docket No. ASC-008CD2), filed May 13, 2005 by Langdo et al.

It is respectfully requested that the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

Respectfully submitted,

Date: September 6, 2005

Reg. No. 50,773

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Attorney for the Applicant

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U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	2002/0100942	08/01/2001	Fitzgerald et al.			06/19/2001
	A2	2002/0084000	07/04/2002	Fitzgerald			12/17/2001
	A3	2002/0096717	07/25/2002	Chu et al.			01/25/2001
	A4	2002/0123197	09/05/2002	Fitzgerald et al.			06/19/2001
·	A5	2002/0123183	09/05/2002	Fitzgerald			07/16/2001
	A6	2002/0123167	09/05/2002	Fitzgerald			07/16/2001
	A7	2002/0125497	09/12/2002	Fitzgerald			07/16/2001
	A8	2002/0125471	09/12/2002	Fitzgerald et al.			12/04/2001
	A9	2002/0168864	11/14/2002	Cheng et al.			
	A10	2003/0013323	01/16/2003	Hammond et al.			
	A11	2003/0025131	02/06/2003	Lee et al.			
	A12	2003/0034529	02/20/2003	Fitzgerald et al.			
	A13	2003/0057439	03/17/2003	Fitzgerald			
	A14	2003/0077867	04/24/2003	Fitzgerald			
	A15	2003/0102498	06/05/2003	Braithwaite et al.			
	A16	2003/0227057	12/11/2003	Lochtefeld et al.			10/04/2002
	A17	2004/0005740	01/08/2004	Lochtefeld et al.			06/06/2003
	A18	2004/0031979	02/19/2004	Lochtefeld et al.			06/06/2003
	A19	2004/0075149	04/22/2004	Fitzgerald et al.			07/23/2003
	A20	2004/0219726	11/04/2004	Fitzgerald			05/26/2004
	A21	2004/0262631	12/13/2004	Fitzgerald			04/16/2004
	A22	2005/0009288	01/13/2005	Cheng et al.			03/17/2004
	A23	2005/0156246	07/21/2005	Langdo et al.			03/07/2005
	A24	4,010,045	03/01/1977	Ruehrwein			
	A25	4,710,788	12/01/1987	Dambkes et al.			
	A26	4,900,372	12/13/1990	Lee et al.			
	A27	4,987,462	01/22/1991	Kim et al.			
	A28	4,990,979	02/05/1991	Otto			
	A29	4,997,776	03/05/1991	Harame et al.			
	A30	5,013,681	05/07/1991	Godbey et al.			
	A31	5,091,767	02/25/1992	Bean et al.			
EXAMIN	ER		·	DATE CONSII	DERED		

EXAMINER

INFORMATION DISCLOSURE STATEMENT

ATTY DOCKET NO.:

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ZII	DA'	TENT	DOCI	MENTS
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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A32	5,097,630	03/24/1992	Maeda et al.			
	A33	5,155,571	10/13/1992	Wang et al.			
	A34	5,159,413	10/27/1992	Calviello et al.			
<u>.</u>	A35	5,166,084	11/24/1992	Pfiester			
	A36	5,177,583	01/05/1993	Endo et al.			
	A37	5,202,284	04/01/1993	Kamins et al.			
	A38	5,207,864	05/04/1993	Bhat et al.			
	A39	5,208,182	05/04/1993	Narayan et al.			
	A40	5,210,052	05/11/1993	Takasaki			
	A41	5,212,110	05/18/1993	Pfiester et al.			
	A42	5,221,413	06/22/1993	Brasen et al.			<u> </u>
	A43	5,241,197	08/31/1993	Murakami et al.			
	A44	5,250,445	10/05/1993	Bean et al.			
	A45	5,252,173	10/12/1993	Inoue			
	A46	5,279,687	01/18/1994	Tuppen et al.		 	
	A47	5,285,086	02/08/1994	Fitzgerald, Jr.			
	A48	5,291,439	03/01/1994	Kauffmann, et al.			
	A49	5,298,452	03/29/1994	Meyerson			
***	A50	5,308,444	05/03/1994	Fitzgerald et al.			
	A51	5,310,451	05/10/1994	Tejwani et al.			
	A52	5,316,958	05/31/1994	Meyerson			
	A53	5,346,848	09/13/1994	Grupen-Shemansky et al.			
	A54	5,374,564	12/20/1994	Bruel			
	A55	5,413,679	05/09/1995	Godbey		-	
	A56	5,424,243	06/13/1995	Takasaki			
	A57	5,425,846	06/20/1995	Koze et al.			
	A58	5,426,069	06/20/1995	Selvakumar et al.			
	A59	5,426,316	06/20/1995	Mohammad			
	A60	5,461,243	10/24/1995	Ek et al.			
	A61	5,461,250	10/24/1995	Burghartz et al.			
	A62	5,462,883	10/31/1995	Dennard et al.			

DATE CONSIDERED

A90

A91

A92

A93

EXAMINER

5,847,419

5,859,864

5,877,070

5,891,769

12/08/1998

01/12/1999

03/02/1999

04/06/1999

Imai et al.

Goesele et al.

DATE CONSIDERED

Liaw et al.

Jewell

INFORMATION DISCLOSURE STATEMENT

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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE			
	A63	5,476,813	12/19/1995	Naruse						
	A64	5,479,033	12/26/1995	Baca et al.						
	A65	5,484,664	01/16/1996	Kitahara et al.						
	A66	5,523,243	06/04/1996	Mohammad						
	A67	5,523,592	06/04/1996	Nakagawa et al.						
	A68	5,534,713	07/09/1996	Ismail et al.						
	A69	5,536,361	07/16/1996	Kondo et al.						
	A70	5,540,785	07/30/1996	Dennard et al.						
	A71	5,596,527	01/12/1997	Tomioka, et al.						
	A72	5,617,351	04/01/1997	Bertin, et al.						
	A73	5,630,905	05/20/1997	Lynch et al.						
•	A74	5,633,516	05/27/1997	Mishima et al.						
	A75	5,659,187	08/19/1997	Legoues et al.						
	A76	5,683,934	11/04/1997	Candelaria						
	A77	5,698,869	12/16/1997	Yoshimi et al.						
	A78	5,714,777	02/03/1998	Ismail et al.						
	A79	5,728,623	03/17/1998	Mori						
	A80	5,739,567	04/14/1998	Wong						
	A81	5,759,898	06/02/1998	Ek et al.						
	A82	5,777,347	07/07/1998	Bartelink						
	A83	5,786,612	07/28/1998	Otani et al.						
	A84	5,786,614	07/28/1998	Chuang, et al.						
	A85	5,792,679	08/11/1998	Nakato						
	A86	5,801,085	09/01/1998	Kim et al.						
	A87	5,808,344	09/15/1998	Ismail et al.						
	A88	5,810,924	09/22/1998	Legoues et al.						
· · · · · · · · · · · · · · · · · · ·	A89	5,828,114	10/27/1998	Kim et al.	 					

EXAMINER

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-	.		II S	PATENT	r DOCUMENT			
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	,	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A94	5,906,708	05/25/1999	Robinson	et al.			
	A95	5,906,951	05/25/1999	Chu et al.				
	A96	5,912,479	06/15/1999	Mori et al.				
	A97	5,943,560	08/24/1999	Chang et a	l.			
	A98	5,963,817	10/05/1999	Chu et al.				
	A99	5,966,622	10/12/1999	Levine et a	ıl.			
	A100	5,998,807	12/07/1999	Lustig et a	1.			
	A101	6,010,937	01/04/2000	Karam et a	ıl.			
	A102	6,013,134	01/11/2000	Chu et al.				
	A103	6,030,884	02/29/2000	Mori				
	A104	6,033,974	03/07/2000	Henley et a	al.			
	A105	6,033,995	03/07/2000	Muller				
	A106	6,039,803	03/21/2000	Fitzgerald	et al.			
	A107	6,058,044	05/02/2000	Sugiura et				
	A108	6,059,895	05/09/2000	Chu et al.				
	A109	6,074,919	06/13/2000	Gardner et	al.			
	A110	6,096,590	08/01/2000	Chan et al.				
	AIII	6,103,559	08/15/2000	Gardner et	al.			
	A112	6,107,653	08/22/2000	Fitzgerald				
	A113	6,111,267	08/29/2000	Fischer et	al.			
	A114	6,117,750	09/12/2000	Bensahel e	t al.			
	A115	6,124,614	09/26/2000	Ryum et al	1.			
	A116	6,130,453	10/10/2000	Mei, et al.				
	A117	6,133,799	10/17/2000	Favors, Jr.,	, et al.			
	A118	6,140,687	10/31/2000	Shimomura	a et al.			
	A119	6,143,636	11/07/2000	Forbes, et	al.			
- 	A120	6,153,495	11/28/2000	Kub et al.				
	A121	6,154,475	11/28/2000	Soref et al	•			
	A122	6,160,303	12/12/2000	Fattaruso	***************************************			
	A123	6,162,688	12/19/2000	Gardner et	al.			
	A124	6,184,111	02/06/2001	Henley et a	al.			

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	-	•	U.S.	PATEN	T DOCUMENTS			
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME		CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A125	6,191,006	02/20/2001	Mori				
	A126	6,191,007	02/20/2001	Matsui et a	al.			
	A127	6,191,432	02/20/2001	Sugiyama	et al.			
	A128	6,194,722	02/27/2001	Fiorini et a	ıl.			
	A129	6,204,529	03/20/2001	Lung, et al	1.			
	A130	6,207,977	03/01/2001	Augusto				
	A131	6,210,988	04/03/2001	Howe et al	l.			
	A132	6,218,677	04/17/2001	Broekaert				
	A133	6,232,138	05/15/2001	Fitzgerald	et al.			
	A134	6,235,567	05/22/2001	Huang				
	A135	6,242,324	06/05/2001	Kub et al.				
	A136	6,249,022	06/19/2001	Lin, et al.				
	A137	6,251,755	06/26/2001	Furukawa	et al.			
<u></u>	A138	6,261,929	07/01/2001	Gehrke et	al.			
	A139	6,271,551	08/07/2001	Schmitz et	al.			
	A140	6,271,726	08/07/2001	Fransis et	al.			
	A141	6,291,321	09/18/2001	Fitzgerald				
	A142	6,313,016	11/06/2001	Kibbel et a	ıl.			
	A143	6,316,301	11/13/2001	Kant				
	A144	6,323,108	11/27/2001	Kub et al.				
	A145	6,329,063	12/11/2001	Lo et al.				
	A146	6,335,546	01/01/2002	Tsuda et al	i.			07/30/1999
	A147	6,350,993	02/26/2002	Chu et al.	-			
	A148	6,368,733	04/09/2002	Nishinaga				08/05/1999
	A149	6,372,356	04/16/2002	Thornton 6	et al.			04/028/2000
	A150	6,399,970	06/04/2002	Kubo et al				09/16/1997
	A151	6,403,975	06/11/2002	Brunner et	al.			
	A152	6,406,589	06/18/2002	Yanagisaw	/a			
	A153	6,407,406	06/18/2002	Tezuka		1		06/29/1999
	A154	6,425,951	07/30/2002	Chu et al.				08/06/1999
	A155	6,429,061	08/06/2002	Rim				07/26/2000

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U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A156	6,521,041	02/18/2003	Wu et al.			04/09/1999
	A157	6,521,041	02/18/2003	Wu et al.			04/09/1999
	A158	6,555,839	04/29/2003	Fitzgerald			05/16/2001
	A159	6,573,126	06/03/2003	Cheng et al.			08/10/2001
	A160	6,583,015	06/24/2003	Fitzgerald et al.			08/06/2001
	A161	6,593,191	07/15/2003	Fitzgerald			05/16/2001
	A162	6,602,613	08/05/2003	Fitzgerald			
	A163	6,646,322	11/11/2003	Fitzgerald			07/16/2001
	A164	6,649,480	11/18/2003	Fitzgerald et al.			06/19/2001
	A165	6,677,192	01/13/2004	Fitzgerald			07/16/2001
	A166	6,703,144	03/09/2004	Fitzgerald			03/18/2003
	A167	6,703,688	03/09/2004	Fitzgerald			07/16/2001
	A168	6,723,661	04/20/2004	Fitzgerald			07/16/2001
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

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	B1	2001-319935	11/16/2001	JP				N	Y
	B2	4-307974	10/30/1992	JР				N	N
	ВЗ	10-270685	10/09/1998	JP				N	Y
	B4	6-252046	11/19/1992	JP				N	Y
	B5	7-240372	09/12/1995	JP				NO	Abstract
	B6	11-233744	08/27/1999	JP				N	N
	В7	2-210816	08/22/1990	JP				N	Abstract
	В8	6-177046	06/24/1994	JP			*****	N	Abstract
	В9	5-166724	07/02/1993	JP				N	Abstract
	B10	61-141116	06/28/1996	JР			1	N	Abstract
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	B22	0 587 520	03/16/1994	EP				N	Y
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